



## **NEIGHBORHOOD/COMMUNITY AFFAIRS COMMITTEE MEETING**

ADDENDUM MATERIAL

COMMISSION CHAMBER, 3<sup>RD</sup> FLOOR, CITY HALL

MARCH 20, 2015 AT 2:00PM

Neighborhood/Community Affairs Committee

Commissioner Edward L. Tobin, Chairperson

Commissioner Micky Steinberg, Vice-Chairperson

Commissioner Michael Grieco, Member

Commissioner Deede Weithorn, Alternate

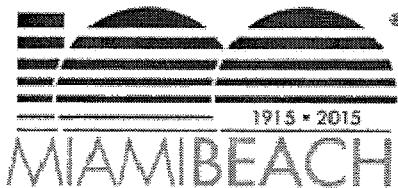
### **ADDENDUM MATERIAL #2**

#### **DISCUSSION REGARDING THE FUTURE USE OF LED ILLUMINATED LIGHTS AT KEY CROSSWALKS.**

*Commission Item C4F, March 11, 2015*

*(Requested by Commissioner Grieco)*

Jose Gonzalez, Transportation Director



OFFICE OF THE CITY MANAGER

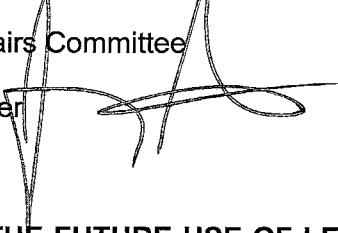
## COMMITTEE MEMORANDUM

TO: Neighborhood/Community Affairs Committee

FROM: Jimmy L. Morales, City Manager

DATE: March 20, 2015

SUBJECT: **DISCUSSION REGARDING THE FUTURE USE OF LED ILLUMINATED LIGHTS AT KEY CROSSWALKS**



*This item was referred to the Neighborhood/Community Affairs Committee (NCAC) by Commissioner Michael Grieco at the March, 11, 2015 City Commission meeting.*

### **BACKGROUND**

Pursuant to the direction provided by the City Commission, Transportation Department staff has completed an analysis in regards to the potential implementation of illuminated crosswalks (i.e., In-Roadway Light Assembly (IRLA)) at key unsignalized crosswalk locations. IRLA's are used to enhance the safety of pedestrians crossing at unsignalized crosswalks. The IRLA includes in-roadway lights, signs, sign support structures, cabinet, electronics, wiring, and pedestrian detectors for a complete crossing. When a pedestrian enters the crosswalk, the LED strobe lights embedded in the roadway pavement are activated. Pedestrian detection/activation occurs by one of four ways: pedestrian push button, microwave detection, laser bollards, and pedestrian pad. The flashing amber LED strobe lights alert oncoming motorists that they are approaching an occupied crosswalk and should immediately reduce speed. The flash of the amber LED strobe lights is easily seen by the approaching motorists at a sufficient distance to permit vehicles to slow down and come to a safe stop.

### **ANALYSIS**

Transportation Department staff has reached out to the Florida Department of Transportation (FDOT) and Miami-Dade County in regards to IRLA's. Currently, two (2) devices are listed on the FDOT Approved Product List and approved for installation on FDOT roadways. Two (2) companies (Traffic Safety Corp. and Temple, Inc.) currently manufacture the two (2) proprietary devices on FDOT's Approved Product List. It is important to note that the only type of activation currently approved by FDOT is a pedestrian push button. Thus, infrared detection, laser bollards, and pedestrian pads have not been approved for use on state roads. Miami-Dade County has accepted a request for consideration of IRLA with pedestrian push button activation manufactured by Traffic Safety Corp. and certified by FDOT. While approved by FDOT, the product has not yet been approved by Miami-Dade County due to some concerns with product design and long-term maintenance.

Currently, more than 10 agencies in Florida have installed IRLA's. All implementations in Florida are using a Traffic Safety Corp. product. The most recent installations completed in 2014 include Palm City and Fort Lauderdale. Other cities in Florida have installed IRLA's which have not been certified by any agency. It is important to note that the only location in Miami-Dade County where these devices have been installed is Miami International Airport (MIA). Staff research has indicated that the devices installed at MIA have not been approved by FDOT or Miami-Dade County and have had some longstanding operational and maintenance issues.

Please refer to Attachment A for a list of unsignalized crosswalk locations in the City where implementation of IRLA's has been found to be feasible. Approximately fifteen locations have been identified and prioritized in the attachment. The locations were prioritized based on potential to enhance pedestrian safety and implementation timeline. Attachment B depicts the various devices, types of activation, and associated capital costs.

## **CONCLUSION**

The City's Transportation Department works closely with the Miami-Dade County and FDOT on improving safety and operational conditions of the City's transportation network. Considering Miami-Dade County currently does not have any device on its Qualified Product List and that FDOT approval might take some time, the Administration recommends moving forward with a pilot project in the immediate term consisting of up to four (4) locations from the list of feasible locations identified in Attachment A. It would be most advantageous if the selected locations are not affected by ongoing or imminent construction projects and preferably on streets under the City's jurisdiction. For implementation on a state road under FDOT jurisdiction, a permit from the state would be required. It is recommended that the duration of the pilot project be a minimum of six (6) months. Prior to the implementation of the devices at the selected pilot locations, staff would conduct a "pre" study consisting of observations in regards to the level of motorists' compliance at unsignalized crosswalks. After the initial 6-month trial period, staff will conduct a "post" analysis to determine the effectiveness of the devices for each pilot location (i.e., motorists' compliance at illuminated crosswalks in comparison to unsignalized crosswalks).

Additionally, the Administration recommends testing the two (2) FDOT-approved IRLA devices in order to obtain a better understanding in terms of capital cost, maintenance, and reliability of the devices. Considering that the devices will be installed on travel lanes, the installation and maintenance of the devices will require lane closures. Thus, it is important to select devices that are the most reliable and have a long service life in order to minimize impacts to traffic and cost to the City.

Funding for a pilot project can be provided from the Pedestrian Crossing Improvements capital project.

The above information is presented to the members of the NCAC for discussion and input.

Attachments:

- A: Illuminated Crosswalk Locations
- B: Illuminated Crosswalk Devices and Cost

*JRG MM*  
JLM/KGB/JRG/MM

<b>Illuminated Crosswalks - Locations</b>	
<b>Proposed Locations</b>	<b>Comment</b>
Collins Avenue/83 Street	<p>Review of 2011 to 2014 accident data showed an accident involving a pedestrian 100 feet south of Collins Avenue/83 Street intersection. Accident hasn't occurred at the crosswalk, however, considering there is an unsignalized crosswalk at this location, pedestrian crosswalk enhancement is recommended. The closest signalized crosswalk is Collins Avenue/81 Street to the south located 700 feet away and Collins Avenue/85 Street to the north located 650 feet away</p> <p>It is important to note that FDOT plans indicate implementation of Rapid Rectangular Flashing Beacons (RRFB) at this location.</p>
Alton/13 Street North Beach Elementary	<p>Review of 2011 to 2014 accident data showed an accident involving a student 200 feet north of Chase Avenue/41 Street intersection. Accident hasn't occurred at the crosswalk, however, considering there is an unsignalized crosswalk at this location used by students pedestrian crosswalk enhancement is recommended (mostly used by Temple Beth Shalom).</p> <p>Even though review of 2011 to 2014 accident data does not show any accidents at this location, enhancement of pedestrian crossing is recommended at the mid-block crosswalk located on Prairie Avenue just north of 41 Street (heavily used by North Beach Elementary).</p>

Proposed Locations	Comment	State Road (SR); County Road (CR); City Street (CMB)
Illuminated Crosswalks - Locations		
Collins Avenue/87 Street	Even though review of 2011 to 2014 accident data does not show any accidents at this location, enhancement of pedestrian crossing is recommended due to current unsignalized crosswalk. The closest signalized crosswalk is Collins Avenue/85 Street to the south located 700 feet away and Collins Avenue/88 Street to the north located 500 feet away.	SR
Liberty Avenue/22 Street	Even though review of 2011 to 2014 accident data does not show any accidents at this location, enhancement of pedestrian crossing is recommended due to current unsignalized crosswalk and use of the crosswalk to access Miami Beach Branch Library, Bass Museum and Miami City Ballet.	CMB
Lenox Avenue/4 Street (in front of South Pointe Elementary)	Even though review of 2011 to 2014 accident data does not show any accidents at this location, enhancement of pedestrian crossing is recommended due to current unsignalized crosswalk used by students of South Pointe Elementary.	CMB
4343 Collins Avenue	Even though review of 2011 to 2014 accident data does not show any accidents at this location, enhancement of pedestrian crossing is recommended due to current unsignalized crosswalk.	SR

<b>Illuminated Crosswalks - Locations</b>		
<b>Proposed Locations</b>	<b>Comment</b>	<b>State Road (SR); County Road (CR); City Street (CMB)</b>
West Avenue (multiple streets)	<p>Location recommended for the implementation is 13 Street (unsignalized crosswalk). However, considering that there is a reconstruction project along West Avenue coming soon, it is recommended to hold off the implementation until the project is completed. Once traffic normalizes along West Avenue, the the County will be evaluating implementation of permanent RRFB's at 9 and 12 Street along West Avenue as well as traffic signal at West Avenue/14 Street.</p> <p>Additional location recommended for the implementation of illuminated crosswalk is West Avenue/15 Terrace (unsignalized crosswalk). Even though review of 2011 to 2014 accident data does not show any accidents at this location, enhancement of pedestrian crossing is recommended due to current unsignalized crosswalk and moderate pedestrian activity at this location. As aforementioned, it is recommended to hold off the implementation until the reconstruction project is completed prior to installing any devices.</p>	CMB
Convention Center Drive (optional)	<p>Additional location recommended for the implementation of illuminated crosswalk is West Avenue/6 Street (unsignalized crosswalk). Even though review of 2011 to 2014 accident data does not show any accidents at this location, enhancement of pedestrian crossing is recommended due to current unsignalized crosswalk and moderate pedestrian activity at this location. As aforementioned, it is recommended to hold off the implementation until the reconstruction project is completed prior to installing any devices.</p>	CMB
	<p>Even though review of 2011 to 2014 accident data does not show any accidents at this location, enhancement of pedestrian crossing is recommended at any of 4 crosswalks located along Convention Center Drive between 17 Street and Dade Boulevard.</p>	

Illuminated Crosswalks - Devices and Cost			
Products (FDOT APL)	Type of Activation <sup>1</sup>	Price for 10 modules for 4-lane bi-directional implementation <u>AC powered</u>	Price for 10 modules for 4-lane bi-directional implementation <u>solar powered</u>
Temple, INC. In-Roadway Light Assembly	Pedestrian Push Button (PPB)	\$ 18,000.00	\$ 22,100.00
	Microwave Detection (MD)	\$ 18,500.00	\$ 22,600.00
	Laser Bollards (LB) <sup>2</sup>	\$ 28,500.00	\$ 32,100.00
Traffic Safety Corp, INC. In-Roadway Light Assembly	Pedestrian Push Button (PPB)	\$ 11,465.00	\$ 12,763.00
	Microwave Detection (MD)	\$ 12,225.00	\$ 13,523.00
	Laser Bollards (LB) <sup>2</sup>	N/A	N/A

<sup>1</sup> The only type of activation currently approved by FDOT is a push button.

<sup>2</sup> Laser Bollards are not recommended due to high maintenance cost. In order for the system to operate properly, laser beam between two bollards has to be perfectly aligned. Considering that bollards are frequently hit by various groups of crosswalk and road users, frequent adjustment to alignment are needed.

**NOTE: Estimate does not include taxes, freight and the installation cost.**